



# Call Manager Express (CME)

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## Call Manager Express Overview

Cisco Unified Communications Manager Express (formerly known as Cisco Unified Call Manager Express) is a call-processing application in Cisco IOS software that enables Cisco routers to deliver key-system or hybrid PBX functionality for enterprise branch offices or small businesses.

The Network-Advantage license is required for the CME feature on the ESR6300:

IP Phones are powered by ESR6300 LAN ports PoE/PoE+ and can negotiate power if they support the CDP/LLDP protocols.

There are several sources of information available for Call Manager Express:

- [Product Marketing Information](#)
- [Cisco Unified Communications Manager Express System Administrator Guide](#)
- [All of the Support Information](#)
- [Basic Configuration Guide for CUCME/CME](#)
- [Cisco Unified Communications Manager Express FAQ](#)

## SCCP Configuration Example

Generate configuration files for SCCP Phones:

```
telephony-service  
max-ephones 24
```

```

max-dn 200
ip source-address 192.168.8.15 port 2000
load 7945 term45.default.loads
!
!
ephone-dn 8
number 1008
name sccp-08
!
!
ephone-dn 9
number 1009
name sccp-09
!
ephone 8
device-security-mode none
mac-address 00A3.D1F3.6FAD
type 7945
button 1:8
!
!
ephone 9
device-security-mode none
mac-address 00A3.D1F3.6FC0
type 7945
button 1:9

```

SCCP Configuration tftp-server:

```

tftp-server bootflash:term45.default.loads
tftp-server bootflash:SCCP45.9-4-2SR3-1S.loads
tftp-server bootflash:cvm45sccp.9-4-2ES26.sbn
tftp-server bootflash:cnu45.9-4-2ES26.sbn
tftp-server bootflash:apps45.9-4-2ES26.sbn
tftp-server bootflash:jar45sccp.9-4-2ES26.sbn
tftp-server bootflash:dsp45.9-4-2ES26.sbn
!

```

## SCCP Show Command Example

The following are two examples of SCCP:

```

Router#sh telephony-service ephone
Number of Configured ephones 2 (Registered 0)
ephone 8
Device Security Mode: Non-Secure
mac-address 00A3.D1F3.6FAD
type 7945
button 1:8
keepalive 30 auxiliary 30
actual keepalive 30 auxiliary 30
multicast-moh
max-calls-per-button 8
busy-trigger-per-button 0
Always send media packets to this router: No
Preferred codec: g711ulaw
conference drop-mode never
conference add-mode all
conference admin: No
privacy: Yes
privacy button: No

```

```

user-locale US
network-locale US
lpcor type:
lpcor (incoming):                (outgoing):
!
ephone 9
Device Security Mode: Non-Secure
mac-address 00A3.D1F3.6FC0
type 7945
button 1:9
keepalive 30 auxiliary 30
actual keepalive 30 auxiliary 30
multicast-moh
max-calls-per-button 8
busy-trigger-per-button 0
Always send media packets to this router: No
Preferred codec: g711ulaw
conference drop-mode never
conference add-mode all
conference admin: No
privacy: Yes
privacy button: No
user-locale US
network-locale US
lpcor type:
lpcor (incoming):                (outgoing):
!
Router#sh telephony-service ephone-dn

ephone-dn 8
number 1008
name sccp-08
preference 0 secondary 9
huntstop
call-waiting beep
no cti notify
no cti watch
ephone-dn 9
number 1009
name sccp-09
preference 0 secondary 9
huntstop
call-waiting beep
no cti notify
no cti watch

```

## SIP Configuration Example

Generate Configuration Profiles for SIP Phones:

```

voice register global
mode cme
source-address 192.168.8.16 port 5060
max-dn 20
max-pool 15
load 8845 sip8845_65.12-5-1SR2-2.loads
tftp-path flash:
file text
create profile sync 0095724401230545
ntp-server 192.168.8.15 mode unicast
auto-register
!

```

```
voice register dn 2
number 202
call-forward b2bua busy 100
  call-forward b2bua noan 100 timeout 20
allow watch
name SIP-PHONE2
label 4085252002
voice register pool 2
busy-trigger-per-button 2
id mac 0045.1D86.F992
type 8845
number 1 dn 2
dtmf-relay sip-notify
codec g711ulaw
```

SIP Configuration TFTP-Server:

```
tftp-server flash:vc48845_65.12-5-1SR2-2.sbn
tftp-server flash:fb18845_65.BEV-01-006.sbn
tftp-server flash:kern8845_65.12-5-1SR2-2.sbn
tftp-server flash:rootfs8845_65.12-5-1SR2-2.sbn
tftp-server flash:sb28845_65.BEV-01-015.sbn
tftp-server flash:sip8845_65.12-5-1SR2-2.loads
!
```

## Debug Commands

Two commands that are helpful in debugging are:

```
router#debug ccsip message
router#debug voice register event
router#
000313: *Jun 18 02:54:31.888: voice_reg_process_bulk_registration: preparing unsolicited
sharedln registration for 6010@28.18.88.70
000314: *Jun 18 02:54:31.888: voice_reg_process_bulk_registration: preparing unsolicited
sharedln registration for 6779@28.18.88.70
000315: *Jun 18 02:54:31.888: voice_reg_process_bulk_registration: preparing unot presence
registration for watcher [sip:6010@28.18.88.70] presentity [sip:6777@28.18.88.1]
000316: *Jun 18 02:54:31.888: voice_reg_process_bulk_registration: preparing unot presence
registration for watcher [sip:6010@28.18.88.70] presentity [sip:6506777@28.18.88.1]
```

## SIP Show Command Example

The following are two examples of SIP:

```
Router#sh voice register global
CONFIG [Version=12.6]
=====
Version 12.6
Mode is cme
Auto-registration is enabled
Max-pool is 15
Max-dn is 20
Outbound-proxy is enabled and will use global configured value
Security Policy: DEVICE-DEFAULT
Forced Authorization Code Refer is enabled
Source-address is 192.168.8.16 port 5060
Load 8845 is sip8845_65.12-5-1SR2-2.loads
```

```
NTP Server Address is 192.168.8.15
NTP Server Mode is: unicast
Time-format is 12
Total SIP phones registered: 1
Total Registration Statistics
  Registration requests : 8
  Registration success   : 2
  Registration failed    : 0
  unRegister requests    : 1
  unRegister success     : 1
  unRegister failed      : 0
  Auto-Register requests : 0
  Attempts to register
    after last unregister : 0
  Last register request time : 11:29:38.113 PDT Mon Jul 8 2019
  Last unregister request time : 07:16:06.845 PDT Wed Jul 3 2019
  Register success time      : 11:29:38.113 PDT Mon Jul 8 2019
  Unregister success time    : 07:16:06.845 PDT Wed Jul 3 2019
```

```
Router#sh voice register dn 2
```

```
Dn Tag 2
```

```
Config:
```

```
  Number is 202
  Preference is 0
  Huntstop is disabled
  Name SIP-PHONE2
  Allow watch is enabled
  Auto answer is disabled
  Label is 4085252002
  call-forward b2bua busy 100
  call-forward b2bua noan 100 timeout 20
  Pool 2      has this DN configured for line 1
```

